

W5YI

America's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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United Kingdom Looks Ahead to Ham Radio Without Morse Code

"If amateur radio is to survive, we need to encourage more people, particularly youngsters, into the hobby. The Agency believes that there should be a relatively simple entry point into amateur radio to get people started (a Foundation License). This entry point would require minimal qualifications and allow newcomers a first taste of amateur radio. Our initial thoughts are that applicants will need to have completed a short competence based practical course which would cover the basics of amateur radio; safety, operating techniques (including on-air training under direct supervision), basic license conditions and basic technical knowledge. At the end of the course, a simple multiple choice examination would be conducted by the course tutor. Ideally these courses would be run through approved amateur radio clubs." [Excerpted from a Public Notice posted to the UK Regulatory Agency website]

A novel Amateur Radio restructuring proposal is now under serious consideration by both the *Radio Society of Great Britain* and the UK's *Regulatory Agency (RA)*. The new license structure is the result of a *"Future of Amateur Radio Examinations Working Group"* chaired by RSGB Council Member, Richard Horton, G3XWH. The new concept is basically an "apprentice" type licensing process. The purpose of the Working Group was two-fold:

- (1) to have a plan for Amateur Radio after the anticipated removal of the Morse requirement at the World Radio Conference in 2003 and;
- (2) to encourage more people to join the hobby ...especially youngsters.

The RSGB Working Group said any recommended qualifications for a ham ticket "...must be 'long term' since the historic 'shelf life' of UK Amateur Radio qualifications ...has been 20+ years to date...." G3XWH said, "The objective is "...to produce a competent and safe Amateur motivated towards self training in radio communications."

The RA, the United Kingdom's telecom and licensing agency, is already publicly supporting the

new lineup which involves the introduction of a new entry level termed the "Amateur Radio Foundation" license. Martin Cain, who heads up the CB and Amateur Radio unit at the agency has been actively promoting the new concept.

He said the proposed new license "...is intended to provide an easy entry into the hobby, without the need for extensive technical knowledge currently required to pass the *Radio Amateur's Examination (RAE)*." He added, "It is hoped that as their interest grows, 'Foundation' license holders will, in due course, progress to a 'Full' Amateur Radio license."

The RAE is a two section multiple-choice examination held twice yearly at *City & Guilds Examination Centers*. It tests electronic theory, license regulations, interference and operating procedures

There is also an NRAE, a 30-hour Novice course and exam administered by the RSGB and run at local radio clubs and schools. The RSGB network also administers the 5 wpm and 12 wpm code exams.

The Radio Society of Great Britain initially

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published information on the new Foundation license proposal in the December issue of their monthly journal, RadCom ...with additional input from their membership requested in their February 2001 issue.

It appears, however, the Regulatory Agency's initial concept of the new Foundation license is somewhat different from that of the RSGB. The RA mentions on their web site that "As qualifications are minimal, operation would be limited to the VHF amateur bands and only commercially produced equipment would be permitted. Power would be limited to 25W with antennas restricted to omnidirectional dipoles."

On the other hand, the RSGB Working Group firmly believes that HF access should be available to all license classes - including the Foundation license - and that operation with non-type-approved equipment and systems - that is the ability to 'home brew' gear -- must be included.

The committee feels that the advent of inexpensive wireless telephones "...has made low power VHF entry level Amateur Radio qualifications less interesting to newcomers..." And they believe "...additional motivation is needed to attract newcomers into the hobby via practical work, especially through 'hands on' HF experience."

While agreeing that VHF/UHF experimentation "...affords excellent challenges for the more technically oriented amateur, this activity normally falls outside the competency of newcomers," the Working Group strongly feels "...in order to encourage the 'self training' aspect, an HF entry route is needed."

The responses from the RSGB membership have now been examined and another document has been prepared for submission to the Society's leadership and the RA for their consideration. Follows is a capsule version....

Future of Amateur Radio Exams - the next step

The Working Group re-emphasized that any new licensing structure "...needs to be future proof and reflect a future of rapidly changing technology." It provides for only two license classes, Foundation and Full, and allows for supervised radio operation and specialized study in areas that the candidate selects.

The RSGB committee considers the two tier model simpler and more logical. But there are several factions (including the UK Regulatory Agency), who believe that a three class system may be better. One group has a level inserted between Foundation and Full. "If a 3 tier structure were favored, differentiation could be based on power, for example: Foundation 10W, Intermediate 100W and Full 400W," they said.

The RA's *Public Notice* suggested the new lineup may be Foundation, Intermediate and Advanced. "All would require the basic competence course while the Intermediate and Advanced would require additional qualifications," RA said in their web site notice. "Providing there

are sufficient call signs, we would prefer to retain different call signs for each class. It would be necessary to transfer existing licensees into the new classes...."

The RA mentioned that "Consideration was given to making [the Foundation license] a short term license, meaning that after three years the individual would be required to move on to the next level. However, this idea was rejected because it was felt that it was better to keep people in the hobby rather than forcing them to give up if they did not wish to progress to a more advanced level," the RA said ...;adding "It should also be recognized that Amateur Radio should provide an element of choice and some people may be quite happy to stay at this basic level."

At present, Great Britain has four license levels: Novice (there are two variations; the Novice "A" requires 5 wpm code and a no code Novice "B" version), Class B (no code), all band Class A (12 wpm code) and the new Class A/B (5 wpm code.) All except the VHF/UHF Class B tiers requires telegraphy proficiency. Class A, B and A/B licensees get station call signs with a "G" or "M" prefix; Novice call signs begin with the numeral 2.

The RA lineup proposal envisions that current UK Novices would automatically qualify for the new Intermediate Class with existing Full Class A, Class A/B and the (no code) Class B progressing to the new Advanced license.

Another possibility being evaluated by the RSGB is a new "top-of-the-line" Extra Class license positioned above the proposed Foundation/Full structure with a higher power authorization of perhaps 1kW. This would require a higher level of proficiency (for example, more EMC/RFI subject matter) which would be verified through an examination or interview.

Amateur Radio requirements

The UK Working Group believes that the Amateur Radio qualifications of the future should be based on three ingredients: a knowledge segment, a functional segment and a safety segment:

- (1.) The **Competent Element** suggests constructional and operational expertise, as well as basic theory knowledge centered around a 'need to know about' approach.
- (2.) The **Safe Element** refers to EMC knowledge, necessary license conditions as well as electrical safety ...plus general non-interference principles with regard to other spectrum users.

(Note: EMC stands for electromagnetic compatibility, or the ability of receiving and transmitting equipment to co-exist with each other without mutual interference. In the United States, EMC problems are usually referred to as RFI, Radio Frequency Interference.)

- (3) The **Practical (or constructional) Element** should

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be based on an established, relevant and simple project which will produce an affordable but useful end product. For example, the construction of a QRP transceiver, an item of instrumentation, an antenna or even software. "In a sense we are saying that a 'hands on', learning-by-doing approach is likely to lead to higher levels of interest."

"One of amateur radio's strengths over the years has been its great variety of specialized interests. This variety needs to be reflected in the candidate's preparation to hold a license. We believe therefore, that while the safe element, including as it does such topics as EMC, regulations, and so forth, should be a compulsory element, the competency element should reflect the candidate's personal interests. There should, therefore, be a number of possible ways this part may be achieved."

"...actual Amateur radio operation under the supervision of a license holder should be an integral part of all training courses. There are two aspects to this, the first is the maintenance of the level of interest of the candidate but the second is to provide an opportunity for every radio amateur to work to bring new radio amateurs into the hobby."

The UK "Foundation" license

The RSGB envisions that the key elements of the Foundation license would be a 10W power limit on all current Amateur Radio bands, a practically-based training course, operation under supervision of a licensed amateur and construction of a simple kit. The "modular route" involves completion of a series of compulsory and elective modules, with possible exemptions based on prior accomplishment (...such as the completion of a science project.)

Compulsory Foundation Modules include safety, international and national regulations, resolving interference. Basic knowledge of radio and electronic theory would be covered together with practical station operation under supervision.

Elective Foundation Modules are chosen by the candidate and could cover such topics as additional construction projects (such as antennas), specialized emissions and techniques (such as ATV, satellite, digital, etc.), Morse code, software and interfacing, advanced RF techniques, contesting under supervision ...and the like. Emphasis would be on learning-by-doing.

A Foundation License course workbook would be made available covering all compulsory and potential selected modules. It would be signed off by the instructor when the required competency level has been reached. Tutors would come from the RSGB instructor network. The RSGB Working Group has already drafted a sample competency-based study workbook for use by the candidate and instructor.

The UK's proposed Full License

The RSGB said the Full license examination would not include topics that have already been covered in the Foundation licensing process. It would be equivalent to the current Class A license which allows 400W and all privileges on all bands. Passing the Foundation license would be a prerequisite to holding a full license. The higher level competency examination would consist of a revised and shorter syllabus than the current RAE model since there would be no need to duplicate the Foundation elements.

Foundation license operation prior to WRC-2003

The Working Group suggested that, as an interim measure, a "*Foundation Certificate in Amateur Radio*" could be implemented sooner than 2003 if;

- (a.) The applicant has a tested knowledge of the individual Morse code letters – but not at a particular code speed. This would satisfy the current international regulations which require manual recognition of Morse code signals as a pre-requisite to HF access;
- (b.) The on-the-air operation is under the direct supervision of a licensed Amateur who would be responsible for the Foundation licensee's transmissions.

The *Foundation Certificate in Amateur Radio* would permit 10W operation on all bands if the applicant has already passed the written RAE theory exam (or Novice NRAE course.) Otherwise the operation must be under an Amateur's supervision during the Certificate course.

When operating under supervision, the instructor's call sign would be used together with an appropriate appended suffix. Once the applicant earns a regular Foundation license, a new callsign from a different series block would be issued.

The Working Group believes that this "bridging solution" will be capable of rapid – almost immediate – implementation and will satisfy the desire for an attractive 'hands on' introduction to the hobby and lead smoothly into the longer term proposed license structure.

Late Bulletin:

We now understand that a meeting has taken place between the RA and the RSGB with the Agency acknowledging that "...a way may have been found to possibly allow use of the HF bands by Foundation licensees" ...and that "...the International Radio Regulations do not specify the speed of the tests, but rather require that 'a knowledge of Morse' is sufficient." The RA acknowledged that they "...are looking at what we can do before [the Morse requirement is dropped.]" and at allowing other than omni-directional antennas. It was also announced that the RSGB is contacting commercial radio organizations "...to sponsor private funding of amateur radio to stimulate the increase of radio engineers."

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FCC MOVES TO REVOKE FLORIDA AMATEUR'S LICENSE

The FCC has suspended the amateur radio operator license of Leslie D. "Doug" Brewer KC4HAZ of Tampa, Florida and notified him that it intends to revoke his station license for apparent willful and repeated unlawful radio-related activities. He also faces revocation of his GMRS station license.

In early 1996, Brewer was monitored operating a "pirate" FM station on 102.1 MHz from his home which he called "Tampa's Party Pirate.". The FCC sent him a warning about unlicensed broadcasting and its possible penalties. A month later he was again found broadcasting without a license and he was issued a fine of \$1,000.

Later, Brewer tried to get the FCC to grant him "Special Temporary Authority" to operate a transmitter on 102.1, but his request was denied. But that didn't stop Brewer and he continued his pirate broadcast operation into 1997.

When WHPT-FM (102.5 FM) of Sarasota, Florida complained to the FCC that Brewer's FM station was interfering with them, agents from the FCC and U.S. Marshall's Service raided Brewer's home and confiscated his FM transmission equipment in November 1997.

Brewer's version is that he was awakened at 6:30 a.m. by armed U.S. marshals, who handcuffed him. Agents seized equipment from his home studio and gear from a remote van which they rolled into a Ryder truck parked in his driveway. They also dismantled a 150-foot radio tower.

In 1999, Brewer again tried to legally obtain a broadcast license. But while his request was pending, Brewer resumed his 102.1 FM pirate broadcasts using a 950 MHz "studio-to-transmitter" (STL) link from his home to leased warehouse space where the transmitter was housed.

In addition to pirate micro-broadcasting, his business, L. D. Brewer 2-Way Radio sold unauthorized FM broadcast equipment to others which he manufactured.

In early 1997, an undercover agent from the Tampa Field Office visited Brewer's 2-way radio shop and inquired about FM broadcast transmitters. Brewer offered the agent a 40-watt FM transmitter. During that visit, Brewer boasted that he makes these transmitters daily, and showed the agent a unit he was building at the time.

Shortly thereafter, the Tampa Field Office again sent Brewer an official warning notice advising him of the FCC's equipment authorization requirement and the penalties for distributing unauthorized RF devices. Brewer flatly denied that he made or sold any products that required FCC type acceptance, certification, or notification.

A year later, an agent from the Tampa Field Office, posing as a member of the general public, sent an e-mail message to L.D. Brewer's 2-Way Radio requesting information about purchasing a 20-watt FM broadcast band

transmitter. Brewer responded that same day with a price and an address to which payment should be sent.

A money order payment was sent to L.D. Brewer's 2-Way Radio and on Sept. 28, 1998, the Tampa Field Office received the fully assembled 20-watt FM broadcast transmitter set to operate on 91.8975 MHz. On March 2, 2000, the FCC socked Brewer with a \$10,000 fine.

Brewer's defense was that he sells radio "kits for educational purposes" and that "radio kits," even if assembled, do not require notification, type acceptance or certification. The FCC said the device they got was not a kit, instead it was a fully constructed and functional FM radio transmitter, capable of transmitting once power was supplied. Brewer continues to mention the availability of low power broadcast equipment at his "Broadcaster's Candy Store" on the web at <<http://www.ldbrewer.com>>.

In view of Brewer's repeated violations and total disregard for FCC rules, on Feb. 22nd the FCC started proceedings aimed at revoking his existing station licenses.

A March 5th FCC *Public Notice* states: "We find that Mr. Brewer's continuing course of conduct raises questions as to whether he possesses the requisite character qualifications to remain a Commission licensee. Mr. Brewer's history of FCC-related transgressions and apparent contempt for the Commission's regulatory authority are patently inconsistent with his responsibilities as a licensee and belie any suggestion that he can be relied upon to comply with the Commission's rules and policies in the future."

Brewer's ham operator license has been suspended for the balance of its term and his Amateur (KC4HAZ) and GMRS (KAE1170) station licenses have been designated for a hearing. Brewer has 15 days to appeal the suspension *Order*. Also to be determined by the hearing is whether Brewer must pay the \$11,000 in fines that he has accumulated. (*FCC Show Cause Order, adopted Feb. 22, 2001.*)

● **The 50th Anniversary of the Dayton HamVention takes place this year.** Bill Pasternak WA6ITF, producer of the Amateur Radio Newslines broadcasts is assembling a "Ham Radio Time Capsule" which will be sealed at the Newslines-sponsored "Ham Radio Town Meeting" scheduled for Saturday, May 19th. The objective is to put together a "ham radio time capsule" that will capture both ham radio and the HamVention as it is in 2001. The capsule will be sealed at the end of the 2 hour session and presented to the *Dayton Amateur Radio Association* for safe keeping. It will be opened at the 75th Anniversary HamVention in 2026. Bill is looking for small objects ...photos, essays, audiocassettes, etc. that tell the 'story' of ham radio as it exists in the year 2001. You can contact Bill at e-mail: <newsline@arnewsline.org>. One of the topics to be discussed and debated at the forum is "Will there be ham radio in 25 years? And if 'yes', what will amateur spectrum, activity and equipment it look like."

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CUTTING EDGE TECHNOLOGY

I-Glasses are an 8-ounce wearable personal digital video viewing system that provides a personal "virtual big screen movie theater" for users. You just plug into the S-Video (Y/C) or Composite (RCA) input of your TV. The I-Glasses have twin embedded 180,000 pixel lens that provide a virtual 80-inch screen floating 11-feet in front of viewer. (High resolution: 225x-266 lines.) The over-the-ear, adjustable headphones give you stereo (20 Hz to 20K Hz fidelity) sound. High-end model I-Glasses shows video in stereoscopic 3-D! \$400 to \$600 depending on features. See: <www.i-glasses.com>.

The next generation of hard disks is likely to come with copyright protection countermeasures built in. A group of technology companies are quietly incorporating a hardware-based digital music piracy protection scheme called CPRM (Content Protection for Recordable Media) directly into portable disk drives. CPRM is a mechanism for controlling the copying, moving and deletion of digital media on a host device, such as a personal computer, or other digital player.

The technology is sponsored by the distributors of entertainment media but the CPRM patents are owned by the 4C Entity, which comprises Intel, IBM, Matsushita (Panasonic) and Toshiba

Data scrambling CPRM is already being added to removable data storage media such as the Flash memory cards used in MP3 players. Previous devices with built-in copy protection have reached the marketplace before only to disappear under the weight of consumer indifference.

Specs are also being developed that will allow manufacturers to add CPRM technology to fixed hard disk drives and floppy or CD-ROM drives. Only protected content would be blocked.

LED Museum on-line. For everything you ever wanted to know about light-emitting diodes (LEDs), check out the Internet site <http://ledmuseum.home.att.net>. It covers the scientific principles behind LED technology, explains how various colors are created, and shows many of the different types commercially available.

Learn everything you ever wanted to know about electrical connectors and how they're made at Molex's web site: <www.molex.com/training/bce/index>.

html. It explains how the plastic shells are built, shows the different designs available, and how you can make your own connectors for your own home-brew projects.

Digital sound effects for model trains. At least one company provides computer-generated sound effects for model train enthusiasts. Only 20 years ago, Texas Instruments offered a sound-effects integrated circuit that could produce a fair representation of a train whistle, with the right combination of discrete components. But today, QSI Industries makes digital chips that not only realistically play back sampled sounds, but they also simulate the Doppler shift of the train whistle as the model train approaches and departs.

Cut and paste an oscilloscope's waveform. Trying to record a particular signal on an analog oscilloscope was a tricky business at best; long-duration phosphors could "hold" a trace for a while, but recording that waveform for posterity or troubleshooting required literally taking a snapshot of the screen with a Polaroid camera. Today's digital 'scopes can communicate directly with any Windows-based computer. Pictures of waveforms can be downloaded into a PC, pasted into a document, exchanged over the Internet, etc., in a matter of seconds. In addition, Windows 98 supports dual-monitor presentation, so engineers can prepare a report on one video screen and view the oscilloscope's display on another at the same time.

EMERGING COMMUNICATIONS

In 1985, two years after wireless telephone technology emerged on the market, only 350,000 people in the United States owned wireless telephones. A whopping 100 million Americans now use mobile phones, and thirty thousand new customers wire up every day! According to Newsweek, "There will be as many as 1.6 billion cell phone users worldwide by 2005." That may be a low figure.

Researcher Dataquest, Inc., says worldwide cell phone sales increased nearly 50 percent in 2000 to more than 400 million units. Nokia strengthened its lead as the No. 1 vendor in the market last year with shipments growing 66 percent over 1999. Nokia shipped more than 125 million units in 2000 for a 31 percent market share ...more than the number two (Motorola) and three (Ericsson) cell phone maker combined. Nokia has estimated

2001 industry-wide sales of 450 to 500 million mobile phones.

Canada to latest country to consider licensing cell phone jammers. Ottawa-based *Industry Canada*, the Canadian counterpart of our FCC, has begun a 90 day comment period on whether and under what conditions to license technology that prevents cell phone use in such places as restaurants, theaters and concert halls. (Canada Gazette Notice reference number DGTP-002-01.) A decision is expected by year end.

Coming to a cell phone near you. You will soon be navigating the Internet with wireless GPRS. The General Packet Radio Service sends data in packets ...allows people to be continuously linked to the Web. GPRS is a new non-voice value-added service that allows information to be sent and received across a mobile telephone network. GPRS is not related to GPS (the Global Positioning System.) Speed is up to four times faster than a 56K modem. Always connected, no dial-up modem connection is necessary.

Applications range from web browsing to file transfer to home automation -- the ability to remotely access and control in-house appliances and machines. Any service that is used over the fixed Internet today -- File Transfer Protocol (FTP), web browsing, chat, email, telnet ...you name it -- will be as available over the mobile network because of GPRS. The service will be available by subscription.

COMPUTER INFO

Com One, a French telecom company, has developed an Internet appliance that will be hitting the U.S. later this summer. The "@Max" is aimed at non-users of PCs. In addition to Web browsing and POP3 email, it also functions as an answering machine, fax machine, speakerphone, and image viewer. The @Max allows up to four users to access separate email accounts, and users aren't forced to use a specific ISP.

Beta testers said it has an excellent 8-inch passive matrix color display but a poor ("very tiny and difficult to use") keyboard. Cost is in the \$400-\$450 range. <<http://homenetappliance.com/featuredia.html>>.

The @max joins the \$500 Intel® Dot-Station Web appliance in the burgeoning market for digital/Internet appliances. To the dismay of Microsoft, neither the @Max nor the Dot.Station has a Windows-based

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operating system.

According to Strategy Analytics, shipments of online appliances will rise to 31.3 million units, worth \$5.4 billion, by 2005, at an average growth rate of 24 percent.

Home computer ownership to approach 70 million in 2002. By 2002, 68.2 million households will have computers and 66.9 million will have both a computer and Internet access.

Today, just more than half (51%) of all U.S. households have at least one computer and 43.5% have both a computer and Internet access. This figure is up from 1998, when 43.9 million households had a computer and just 26.6 million had Internet access as well.

Top five states in household computer ownership: Alaska 67.0%, Utah 66.8%, New Hampshire 64.3%, Colorado 63.2%, Oregon 61.2%. (SOURCE: Employment Policy Foundation)

Given a choice, which would you rather be without: your television or your computer? A recent survey revealed that over half of online users would rather part with their TV set than their computer. If you think about it, TV is pretty much a one-way communications medium with limited control. The Internet lets you share pictures, music, messages and information with almost anyone at the push of a button. And most TV news departments have the news on-line at their own web sites, anyway.

Can't bear to part with that old computer? It seems hard to believe that it's been over 20 years since the classic computers such as the Apple II and TRS-80 were introduced. Many other machines were produced during that time and have since become obsolete. They still fulfill certain needs, and more than a few owners still can't bear to part with them to this day. Visit the Obsolete Computer Museum on the Internet at <www.obsoletecomputer-museum.org> and learn more about your old favorites, such as the Altair 8800, the Commodore VIC-20, the Apple III, the Atari 800, and many others.

How times have changed. Speaking of obsolete technology, the first hand-held calculator manufactured by Texas Instruments was the SR-10. It was a little more than a "four-banger," offering addition, subtraction, multiplication, division and also square root. It contained over 150 parts and sold for just under \$200 in 1967. Today, most high-school physics students are required to own a scientific

calculator that can do everything the SR-10 could, plus trigonometric functions and much more, for a tenth of the cost.

No wonder my e-mail box has been so jammed lately. Around the world, the number of electronic mail messages is expected to reach over 450 trillion by the year 2003. (Thank goodness not all of them will be printed on paper!)

Take a close look at a computer cartridge. You may see one trace on the edge connector that's slightly longer than the others. Chances are that's the ground trace. Why? It's done that way to make the cartridge "hot-pluggable," or able to be inserted into or removed from the computer while the power is on. Ground must be the first connection made when you plug in the cartridge, and it must be the last connection to be broken when the cart is removed. In some cases, the power supply traces are staggered in length, with ground being the longest, and the power supply pins just slightly shorter, with the rest of the signal traces shorter still.

INTERNET NEWS

What your friendly travel agent and online travel site won't tell you.

Confused by all those Internet travel sites? Each has special deals. But which airline, hotel, vacation or car rental site is best for the trip you want to take ...and how do you find it? The newest bargain travel wrinkles are "site sweeping" and "vacancy reduction". What they do is survey Web sites -- or a major airline, hotel chain or rental company notifies the Web site of their unsold inventory.

SideStep <www.sidestep.com> sweeps the major sites to find their best published rates, but not travel discounters which may have unpublished prices below the major sites. SideStep appears on your computer screen as a box on the left side occupying about a third of the total space. On the right side you can simultaneously call up whatever other site interests you so that you can comparison-shop without a lot of swapping screens.

For unpublished deals, however, you need to go to sites that specialize in liquidating excess travel inventory through unscheduled close-outs, extra seats, empty rooms, cancellations and unsold space promotions ...or to a consolidator or wholesaler. The traditional travel sites -- like Expedia and Travelocity (the largest two by far!) -- won't

tell you about them or where they are.

Site59 <www.site59.com> arranges complete getaways at the last -- or 59th -- minute before departure. It packages unsold flights, hotel rooms and auto rentals, eliminating the common advance-purchase requirements ...and frequently the Saturday night stay-over. It will suggest many options for a quick getaway, including meals and entertainment. Many major suppliers (including American and Delta Airlines) supply their excess inventory to this site.

Last Minute Travel <www.last-minute-travel.com> is another short notice travel site. They will also e-mail you when an offer becomes available. Travel providers list their "soon to perish" offerings based on supply and demand.

11th Hour Vacations <www.11th-hourvacations.com> is another spontaneous travel site. They offer cruises, vacation packages and ground transportation. Select by departure city, destination or date. You can even hold a trip for up to 24 hours, at no charge, before making a final decision.

Priceline.com <www.priceline.com> allows you to specify the price you're willing to pay to fly to and from a city on particular dates. If an airline accepts your price, you're obligated to fly on the routings and times of day they choose.

Expedia and Travelocity do not use the same CRS (computer reservations system) and their findings often are different. Travelocity is powered by Sabre (which owns Travelocity) and Expedia (owned by Microsoft) gets its data from a rival CRS, Worldspan. And the "short notice" sites don't use database oriented systems at all.

Some travel web sites also obtain discounted access to airline inventory, which sometimes allows them to frequently sell flights at fares even lower than the airline itself. Lowestfare.com, Cheaptickets.com and Flycheap.com not only offer "published fares" available to all consumers, but also access to select "contract fares," available only to "bucket shops" ... "no-frills" consolidators and "bulk price" reseller/wholesalers (such a vacation packagers.) There are others, but those three are the biggest.

The bottom line is that all travel sites are not created equal and you need to check more than one for the best fare and itinerary. A little effort on the Web can really pay off!

The recent merger of AOL and Time Warner is having a negative impact on Yahoo! AOL Time Warner says it expects improved financial results, Yahoo!

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says just the opposite. The difference? A subscription-based business and improved advertising model. AOL Time Warner can offer packages involving print, Internet, radio and television advertising. Yahoo! ...only has online ads. Yahoo! and AOL, once fierce competitors, are no longer in the same category. AOL now has more than 28 million who pay to subscribe. Yahoo! is a free advertising-supported service. Its shares have almost sunk back to the \$13 level it went public at in April 1996 after climbing to \$250 in January 2000.

In a five year long bizarre dispute involving millions of dollars made from an Internet sex site, a U.S. District Court in San Jose has ruled that the true owner of the "sex.com" domain address is a San Francisco businessman. Gary Kremen, who first envisioned an educational site, registered the domain name in May 1994 when the Web was a text-only service.

Ex-convict Stephen Cohen was accused of hijacking the domain name the following year which is said to be worth \$100 million. He seized the address by sending a forged letter to the domain name registrar. Network Solutions made the requested transfer and Cohen developed the sex.com site into a multi-million dollar operation.

In 1996, Kremen sued Cohen for theft of property, but the California Supreme Court ruled that domain names are services, not assets or goods. The suit was then changed to fraud. After the guilty verdict, the court ordered Cohen to place \$25 million in escrow and not to transfer any assets.

Cohen defied the ruling, did not place \$25 million in the court's bank and reportedly transferred money to offshore accounts in order to avoid seizure of his assets. On March 2nd Cohen was found to be in contempt for violating the court's orders and failing to show up for hearings.

A warrant has now been issued for his arrest and he is considered an international fugitive. Kremen theoretically has regained control of the domain and says he does not want sex.com to be a porno site. Instead he wants it to be a "sophisticated adult site" (...whatever that means?)

The March 1st *Wall Street Journal's* "Personal Technology" column confirmed what we told you several issues ago.

Google <www.google.com> is the best Internet search engine. I agree with author Walter Mossberg, when he says it is "... thorough, smart, speedy and honest." He called Google "...a beacon in a sea of confusion."

It has a propriety page-ranking system that puts what you need higher in the listings than other search sites do. Google claims more 600 million fully indexed pages and another 600 million partially indexed. And unbelievably, it can search them all in a quarter of a second! No other search engine comes close!

But what Mossberg did not mention was their excellent (and free) customizable toolbar which you can easily install on your Microsoft Internet Explorer browser (version 5.0 or higher.) You can make it disappear/reappear by going to View --> Toolbars and then unchecking/checking the Google option. (And totally uninstalling can be easily and quickly accomplished by clicking a line on a pull down menu.)

There are all sorts of features that you can program into the toolbar including doing site (rather than web) searches, finding words on a page, automatic highlighting of words, and finding the single site that Google thinks you want ...and more!

There is also "PageRank," Google's patent-pending technology that rates (using a bar graph) the importance of a given web page to your search words. Get the toolbar at: <<http://toolbar.google.com>>

WASHINGTON WHISPERS

A story in the March 8th Washington Times newspaper reports that ex-FBI agent and accused spy Robert P. Hanssen K9QVL mentions his involvement with radio technology. Hanssen, a 25-year FBI veteran, was arrested Feb. 18 after he supposedly left secret documents for Russian contacts at a park near his house. The government charges that he has been spying for Moscow since 1985. A search of Hanssen's car contained a handwritten page of "numerous apparent radio frequencies," which U.S. officials suspect were FBI radio frequencies used by surveillance personnel.

"Knowing the FBI's radio communication channels would greatly assist Russian spies and intelligence officers in avoiding detection. The FBI also seized a radio scanner from the car."

Another court document left for the Russians and later recovered from a package said that Hanssen "...believed he was under surveillance and had detected radio signals from his car." Hanssen's note said the FBI had installed a tracking device in his car

"The electronic device uses Global Po-

sitioning System satellites to monitor spies' movements and then periodically sends 'burst' transmissions of the movements to the FBI."

Furthermore, the FBI believes "...Hanssen either gave one of the devices to the Russians or revealed its technology." If convicted, he could face execution.

American Lawyer Media (ALM) has sent a formal Freedom of Information Act (FOIA) request to the FCC seeking information about the so-called "Numbers Stations." These are clandestine stations that broadcast strings of numbers generally on short wave frequencies.

New York City-based American Lawyer Media publishes *American Lawyer* (a monthly magazine aimed at the legal profession - <<http://www.americanlawyer.com>>) and the *National Law Journal* (a weekly newspaper about law and litigation - <<http://www.ljx.com/nlj>>.)

The FCC has acknowledged existence of the "Numbers Stations" outside of the country. John Winton, FCC Assistant Chief of the Enforcement Bureau says their "only interest is if they are causing interference. We then work with the country of transmission to seek [a] solution."

ALM has requested copies of all communications between the FCC and any foreign governments, organizations or broadcasters relating to actual or potential interference from "number stations" during the past twenty years.

American Lawyer Media wants to know why these stations are allowed to operate without having to answer to anybody.

Giving spies their marching orders. It is generally accepted that Number Stations are actually the world's intelligence agencies transmitting secret one-way messages to their espionage agents working in foreign countries. Spies located anywhere in the world can be communicated to by their leaders through small, locally available, and unmodified shortwave receivers. The stations can be found anywhere ... from as low as 2 MHz to as high as 26 MHz. The messages -- strings of numbers or phonetic letters -- are sent in Morse (CW) and male and female voices in many different languages (especially Spanish, English, Russian or German) using both AM and SSB.

These strange stations have been heard for at least 40 years. The signals are powerful, but they contain no information about location of the transmitter or the intended

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audience.

The spy stations are believed to originate from many countries including the U.S., Great Britain, Cuba, Russia, Taiwan, Israel, Germany, and others. Some may be some sort of drug dealer network. The encryption scheme used by Numbers Stations (called a "one-time pad" system) is supposedly absolutely unbreakable. They transmit on set schedules, and can be heard by anyone with a standard HF radio.

AMATEUR RADIO

Industry Canada (their FCC) has placed software on its web site to generate Canadian amateur examinations in both English and French. Its purpose is two fold, as a learning aid for prospective amateurs and as an administrative tool for accredited examiners.

The software produces a unique examination for either of Canada's two written examinations (basic or advanced) according to the random selection formula outlined in RIC-3. It will also generate a worksheet, and it has an additional feature that allows self-testing on a home computer. For Windows 95/98/ME/2000.

Go to <<http://strategis.ic.gc.ca/SSG/sf05378e.html>> to download a copy. Simply click on <ICP-arc.exe> to run.

ARRL rejects MiSMA ad in Repeater Directory. In a letter dated February 23, 2001, the *Midwest Spectrum Management Alliance, Inc.* request for a full page ad in the 2001-2002 ARRL Repeater Directory was denied.

ARRL Advertising Manager John Bee, N1GNV stated in a letter to MiSMA Director Jim Fonte, K9FI, of La Porte, IN that "Regrettably, our *Memorandum of Understanding* with the National Frequency Coordinators' Council (NFCC) precludes us from promoting non-recognized bodies that are in competition with NFCC-sanctioned organizations."

Jim Fonte said since "...the FCC recently mandated cooperation between all coordinators, this official action by the ARRL flies in the face of this Commission mandate."

Fonte told us that MiSMA has coordinated over 90 repeaters in the state of Indiana since its beginnings in 1996. He said "The 'incumbent' amateur frequency coordinator for Indiana, the Indiana Repeater Council (IRC) has never cooperated with MiSMA regarding frequency coordination

matters, as it believes that it, and not the radio amateur's served, has the sole-right of 'recognition' of just who the frequency coordinator is in Indiana."

"The neighboring frequency coordinators in Illinois (IRA), Michigan (MARC), Ohio, and Kentucky (SERA), and their affiliated group MACC, and the so-called NFCC have collectively decided not to cooperate with MiSMA in any frequency coordination matter."

"When MiSMA posts a Notice of Proposed Coordination to the IRC and the neighboring coordinators, the IRC contacts the prospective repeater operator directly and without the knowledge of MiSMA, and informs him that MiSMA is not a legal, recognized coordinator, and that if 'they' want to have their repeater listed in the ARRL repeater directory, they must use the IRC and not MiSMA." (See: <www.ircinc.org/recognized.htm>, <www.misma.org> and <www.arrl.org/nfcc> for more information on repeater coordination.)

Helping Boy Scouts with the Radio merit badge? You can find all sorts of helpful information on the requirements for Radio, Electronics, Electricity and all other BSA merit badges at the Internet site <www.meritbadge.com>. It provides a central clearing house for Scouts who are looking for ways to complete the requirements for their badges but don't have enough information on their own. Links to several radio-based web sites are provided, some set up by hams.

FCC Amateur Radio Enforcement

Robert Adams N9DMK (S. Charleston, WV) was warned by certified letter on December 18, 2000 that the club call signs W8NLT and WX8NWS would be canceled by the FCC. Adams signed for the certified letter on December 21. The FCC says it has information that these call signs are still be used by Adams for net and packet operation. He has again been warned not to use these call signs or "...be subject to enforcement action...."

Peter J. Bruno NC8B (Alma, MI).
Allen B. Smith AC9K (Glendale, WI),
George C. Troutman W4FIN (Anchorage, KY) and Larry W. Martin N5LM (Barling, AR) have been notified that the FCC has received complaints that they have transmitted on top of ongoing 40-meter communications on several evenings during February 2001. This apparently occurred as a result of their attempt to contact cross-band DX stations that

were operating in the CW band. The FCC admonished them saying that "Amateurs must operate in accordance with Section 97.101" which prescribes operation according to good amateur practice and mandates cooperation in the selection of transmitting frequencies.

Michael P. Deignan KH6HZ (Chepachet, RI) has been notified by the FCC that eight club call signs (WH6DDM, WH6DDN, WH6DDO, WH6DDP, WH6DDQ, WH6DDR, WH6DCR and WH6DCY) in which he is listed as the trustee have been canceled. Deignan did not respond to a January 17, 2001 FCC inquiry concerning these club calls and "...the person whose address you listed for the club call signs in Hawaii has notified us that he does not wish to be associated with the club call signs and does not wish his address to be used." The Michael P. Deignan Repeater Association also holds the club call sign of WE1RD.

Philip F. Krichbaum NØKE (Vail, CO) has notified the FCC that he has removed his KØEC repeater for maintenance, will check the site with a spectrum analyzer and is changing to PL operation. This is in response to an FCC letter advising Krichbaum that it had received complaints that his repeater was transmitting segments of both voice and digital pages on its output frequency. This may be due to intermodulation with a commercial paging system. The FCC thanked him for his prompt response.

Clarence R. Miller NØPKZ (Hardwick, MN) has been advised by the FCC that his 147.075 MHz repeater apparently "...fails to identify, locks on transmit without timing out, transmits squeals on the output frequency and interferes with another repeater system." Furthermore, FCC information indicates that Miller has been notified of these problems before, but "you have declined to take action." The FCC wants to know the identity of the control operators of this repeater, other technical and coordination information and details of any received complaints about its operation.

Carl Vincent of Lake Elsinore, CA has been warned by the FCC that it has evidence that he has been operating transmitting equipment on the Amateur ten meter band without an Amateur Radio license. The FCC said further operation will subject Vincent to a fine and seizure of his radio transmitting equipment. He was asked to contact the FCC immediately.

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FCC CANCELS LOS ANGELES USE OF HAM SPECTRUM

The U.S. Amateur 13-cm band extends from 2390 to 2450 MHz. The 2402 to 2417 MHz segment is allocated to the Amateur Service on a primary basis. The Amateur Service shares the 2417-2450 MHz segment with military radiolocation (radar.)

The City of Los Angeles initially applied in August 1999 for an experimental license to demonstrate how commercially attainable equipment available in the 2402 to 2448 MHz band could be used to downlink microwave video (TVDL) images from airborne police and fire department helicopters to command and control centers on the ground. The spectrum provided enough bandwidth for four 2.4 GHz channels.

The City said their use of this band would greatly improve public safety agency tactical and emergency response. As a result, Experimental License WB2XEN was issued by the FCC effective December 1, 1999.

Informal objections were registered by Art McBride KC6UQH, Thomas O'Hara, W6ORG and *The Amateur Television Network* (ATN) in October and November 1999. In addition, *Petitions for Reconsideration* were filed on December 1, 1999 by the *American Radio Relay League* (ARRL) and on September 1, 2000 by the *Radio Amateur Satellite Corporation* (AMSAT.) Both ATN and ARRL argued that the City's application should not have been granted because the proposed use does not constitute an experimental use of the spectrum.

"Instead, the City's use, they assert, is in reality an extension of the City's existing Part 90 operations in the 2450-2483.5 MHz band to [add] four new 10-MHz wide channels in the 2402-2448 MHz band. No new technology is proposed, only the use of off-the-shelf, conventional analog technology and equipment."

On March 14, 2001 the FCC sent a letter to the Public Safety Telecommunications Division of the City of Los Angeles which sided with the Amateur position. It recognizes that the City is indeed attempting to use the Part 5 Experimental Service as a way to acquire more spectrum for their routine TVDL operations.

The FCC said that existing licensees seeking additional frequencies for their operations should seek them under existing Part 90 rules or should initiate a rulemaking proceeding for the allocation of additional spectrum to their service.

"Experimental licenses ...are not substitutes for regular radiocommunication service licenses," said Charles Iseman, deputy chief of the Electromagnetic Compatibility Division in the FCC's Office of Engineering and Technology. (OET issues all experimental licenses.)

"Experimental authorizations are intended mainly to permit experimentation with new radio technologies or in connection with a research project." Iseman added that

"...the experiment or research project is expected to have specific objectives and a planned termination date."

He said "A close reading of [the] City's application does not reveal an intent to conduct an experiment or research project. Instead the application indicates that the City intends to use Experimental authority to provide continuously and indefinitely the type of microwave video downlink operations it routinely provides under Part 90 and which television broadcast auxiliary stations routinely provide. The application also seeks four frequencies without an adequate showing of need."

In canceling the Los Angeles experimental license for WB2XEN, the FCC said it was aware of the public safety nature of the City's use. "We shall therefore permit the City to operate under this license until December 1, 2001.

- **Hams responded to the 6.8 magnitude earthquake near Seattle.** Some communities were without power and phone lines were jammed. ARES volunteers and the Salvation Army established emergency nets to assist.

- **Progress is being made at stabilizing the Phase 3D Amateur satellite.** The AO-40 team has been able to decrease the hamsat's initial spin rate. The objective is to slow it in the area of 5 RPM. As soon as the spin is favorable, AO-40's attitude will be adjusted to improve communication with Earth. De-spinning the spacecraft is a necessary first step to making any attitude adjustments.

- **The annual introduction of the Amateur Radio Spectrum Protection Act of 2001** was made by Rep Michael Bilirakis of Florida on March 1 in the U.S. House of Representatives. It is now HR 817. He also introduced last year's version.

The bill seeks to amend the *Communications Act of 1934* by requiring the FCC to

- 1) make no reallocation of primary allocations of bands of frequencies of the amateur radio and amateur satellite services;
- 2) not diminish the secondary allocations of bands of frequencies to the amateur radio or amateur satellite service; and
- 3) make no additional allocations within such bands of frequencies that would substantially reduce the utility thereof to the amateur radio or amateur satellite service;

...unless the Commission, at the same time, provides equivalent replacement spectrum to amateur radio and amateur satellite service."

The measure has been referred to the House Committee on Energy and Commerce. It has died there in prior years.

- **Five amateurs have been selected to serve on an ARRL ad hoc 160-Meter Band Plan Committee.** The panel is open for input regarding the current 160-meter band plan and recommendations for changes. E-mail your suggestions to: 160-BANDPLAN@arrrl.org.

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AVOIDING "SPAM" ...UNSOLICITED ELECTRONIC MAIL

It is a big problem because sending bulk e-mail is amazingly cheap. As a general rule, most legitimate businesses do not send unsolicited commercial e-mail (UCE). It is the smaller business that resorts to "spam" and the much of unsolicited e-mails is of questionable legality.

Most are chain letters, pyramid schemes (especially Multilevel Marketing), "Get Rich Quick" schemes, ads for phone sex lines and porno web sites, software for collecting e-mail addresses, bulk e-mailing services, stock offerings for unknown start-up corporations, quack health products and remedies ...and illegally pirated software. The overwhelming majority (about 95%) of recipients don't want to receive these messages.

Junk e-mails are also a serious problem for Internet Service Providers who purchase bandwidth -- their connection to the Internet -- based on the projected usage of their user base. "Bandwidth cost" is perhaps the highest expense of being an ISP. An ISP's server can be crashed by a flood of spam. Unsolicited e-mail also slows down their -- and your -- connection to the Internet.

The best way to prevent junk business e-mails is to be careful with your e-mail address. Spammers often create mailing lists by using scanning programs to search postings to Internet bulletin boards and newsgroups. One way to prevent this is to add an "no spam element" to your user ID when posting a message to any bulletin board or newsgroup. For instance, instead of user-ID@ISP.net, your e-mail address could read userIDno-spam@ISP.net. This is known as "munging" your e-mail address. (Just remember to remove the "no spam element" if you answer a post with e-mail.)

Also, don't give out your e-mail address without knowing how it will be used. Read the terms of use and privacy statements of any site before telling them your address. If you can't find their privacy statement, don't tell them your address. Do not respond to spam. It merely confirms that your address is indeed active and usable..

Study the message header and body to determine the path it took to your mailbox and who is involved. Notify the administrator of the sender's domain of the spam. <<http://combat.uxn.com>> can help you track down the domain's administrator. <<http://spamcop.net>> will send e-mail on your behalf to the appropriate administrator.

The Federal Trade Commission has a program called "Project Mailbox IV." The FTC partners with the U.S. Postal Inspection Service (USPIS), Securities and Exchange Commission (SEC) and the National Association of Attorneys General (NAAG) to stop a wide variety of deceptive offers sent to consumers. Send copies of unsolicited commercial e-mail to the FTC at: uce@ftc.gov.

Pending legislation

There are currently three bills pending in the 107th Congress aimed at combating spam. The *Unsolicited*

Commercial Electronic Mail Act of 2001 (HR95) was introduced by Rep. Gene Green (D-Texas). This bill:

- (1.) Provides criminal penalties for anyone who intentionally sends an unsolicited commercial electronic mail message to a protected computer in the U.S. with the knowledge that any domain name or other initiator identifying information contained in the message is false or inaccurate.
- (2.) Prohibits anyone from sending spam unless it contains a valid e-mail address, conspicuously displayed, so that a recipient may advise their desire not to receive further messages.
- (3.) Makes it unlawful for a person to send such a message in violation of a policy regarding unsolicited commercial e-mail messages. An opportunity must be provided for subscribers to opt not to receive such messages.
- (4.) Directs the Federal Trade Commission to notify violators under this Act, and to require the initiator to delete the names and e-mail addresses of the recipients and providers from all mailing lists.
- (5.) Provides a right of action by a recipient or provider against e-mail initiators who violate the above requirements. Penalty is greater of either, actual costs or \$500 for each such violation, not to exceed a total of \$50,000
- (6.) Requires the FTC not later than 18 months after enactment to submit a report to Congress providing an analysis of the effectiveness and enforcement of this Act and the need (if any) for the Congress to modify any provisions.

This bill has been referred to the House Energy & Commerce Committee, and House Judiciary Committee.

HR113, the *Wireless Telephone Spam Protection Act of 2001* was introduced into the House by Rep. Rush Holt (D-New Jersey.) It amends the *Communications Act of 1934* to make it unlawful for any person to use any covered mobile telephone messaging system to transmit an unsolicited advertisement. It also prohibits the FCC from exempting from certain telephone regulatory requirements any call that violates such prohibition. This bill was referred to the House Energy and Commerce Committee.

Rep. Heather Wilson (R-New Mexico) has dropped HR718, the *Unsolicited Commercial Electronic Mail Act of 2001* into the hopper. It is very similar to HR95

- (1.) Provides criminal penalties for intentionally sending spam to protected computers with false/inaccurate identification.
- (2.) Prohibits any person from sending spam unless it contains a valid e-mail address so that a recipient may send notice of a desire not to receive further messages.
- (3.) Prohibits a person from sending other spam messages after a reasonable period of time following such notice.
- (4.) Requires such messages to include information that: (a) identifies it as unsolicited commercial e-mail; and (b) contains notice of the opportunity for the recipient to request to not receive further messages.
- (5.) Directs the FTC to notify violators under this Act, and to require the initiator to delete the names and e-mail addresses of the recipients and providers from all mailing lists.
- (6.) Requires the names and e-mail addresses of any children of the recipient to be included in such notification.

Like HR95, this bill has been referred to the House Energy and Commerce and House Judiciary Committees.